PROCESS FOR DETACHING OR PREVENTING ATTACHMENT OF MICROORGANISMS TO A SURFACE

This is a continuation of application Ser. No. 153,573, filed on May 27, 1980, now abandoned, which is a continuation-in-part of application Ser. No. 965,319, filed on Dec. 1, 1978, now abandoned, which is a continuation of application Ser. No. 890,239, titled "Injectable Solutions and Processes of Using Such", which was filed on Mar. 27, 1978; this application is a continuation-in-part of application Ser. No. 918,792, titled "Mouthwash and Methods", which was filed on June 26, 1978; this application is a continuation-in-part of application Ser. No. 918,795, titled "Treatment of Sensitive Teeth Syndrome", which was filed on June 26, 1978; this application is a continuation-in-part of application Ser. No. 918,817, titled "Mouthwash and Method for Preventing and Removing Dental Plaque", which was filed on June 26, 1978; this application is a continuation-in-part of application Ser. No. 927,614, titled "Mouthwash and Method for Preventing and Removing Dental Plaque", was filed on July 24, 1978; this application is a continuation-in-part of application Ser. No. 929,119, titled "Mouthwash and Method For Preventing and Removing Dental Plaque", which was filed on July ¢, 1978; this application is a continuation-in-part of application Ser. No. 961,932, titled "Retardation of the Putrefaction of Hides and Skins", which was filed on Nov. 30, 1978; this application is a continuation of application Ser. No. 755,400, which was filed on Dec. 29, 1976, now U.S. Pat. No. 4,097,064, is a continuation-in-part of application Ser. No. 890,239, which was filed on Mar. 27, 1978, is a continuation of application Ser. No. 642,114, which was filed on Dec. 18, 1975, now abandoned, is a continuation-in-part of application Ser. No. 724,942, now abandoned which was filed on Sept. 20, 1976, is a continuation-in-part of application Ser. No. 724,943, which was filed on Sept. 20, 1976, now abandoned, is a continuation-in-part of application Ser. No. 113,362, which was filed on Feb. 8, 1971, now U.S. Pat. No. 3,741,204, is a continuation-in-part of application Ser. No. 123,830, which was filed on Mar. 12, 1971, now U.S. Pat. No. 3,767,812, is a continuation-in-part of application Ser. No. 283,662, which was filed on Aug. 25, 1972, now U.S. Pat. No. 3,805,776, which is a continuation-in-part of application Ser. No. 283,663, which was filed on Aug. 25, 1972, now U.S. Pat. No. 3,828,772, is a continuation-in-part of application Ser. No. 369,236, which was filed on June 12, 1973, now U.S. Pat. No. 3,924,000, and is a continuation-in-part of application Ser. No. 483,010, which was filed on June 25, 1974, now U.S. Pat. No. 3,982,017; application Ser. No. 890,239, is a continuation of application Ser. No. 724,943, is a continuation of application Ser. No. 483,010, is a continuation-in-part of application Ser. No. 369,236, is a continuation-in-part of application Ser. No. 283,662, is a continuation-in-part of application Ser. No. 283,663, is a continuation-in-part of application Ser. No. 123,830, and is a continuation-in-part of application Ser. No. 113,362; application Ser. No. 755,400 is a continuation of application Ser. No. 642,114, is a continuation-in-part of application Ser. No. 483,010, is a continuation-in-part of application Ser. No. 369,236, is a continuation-in-part of application Ser. No. 283,662, is a continuation-in-part of Ser. No. 283,663, is a continuation-in-part of application Ser. No. 123,830, and in a continuation-in-part of application Ser. No. 113,362, application Ser. No. 724,943 is a continuation of application Ser. No. 483,010, is a continuation-in-part of application Ser. No. 369,236, is a continuation-in-part of application Ser. No. 283,662, is a continuation-in-part of application Ser. No. 123,830 and is a continuation-in-part of application Ser. 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BACKGROUND OF THIS INVENTION

1. Field of This Invention

This invention relates to a process for preventing microbes from adhering to surfaces. This invention also relates to a process for detaching microbes from a surface.

2. Various Considerations

Some believe that bacteria attach or adhere to each other and to animal-cell or inert surfaces by means of a glycocalyx of fibers. Such feltlike glycocalyx are a mass of tangled fibers of polysaccharides, or branching sugar molecules, which extend from the bacterial surface. The adhesion mediated by the glycocalyx determines particular locations of bacteria in natural environments, hence such is a major deteriment in the initiation and progression of bacterial diseases. There is specificity of adherence with some species of bacteria.

Algae have polysaccharide fibers similar to those of bacteria.

One theory is that cells can be made to adhere very rapidly to any surface carrying a positive charge by means of coulombic attractions. Certain environmental enzymes, and enzymes from damaged or dead tissues, plus from inflammatory cells, inhibit cell adhesion either directly or indirectly. Some believe cell detachment is affected by physiologic and pathologic events in the cells in question, and in cells near to them. Various metabolic inhibitors apparently facilitate to a degree cell detachment from a surface. Chlorhexidine apparently facilitates cell detachment.